

**When a Competing Logic Arises:  
A Cross-National Study of How Environmental Investment Funds  
Make Firms Greener**

**ABSTRACT**

Environmental investing has prominently emerged in the finance profession but there is little research addressing whether it leads to a tangible change to corporate environmental performance and, if so, when it happens. Building upon and extending the institutional logic perspective, we incorporate a framework around power relationship to analyze a panel dataset of 678 firms from 21 countries between 2002-2011 and rich qualitative data from fieldwork and archives. Our findings suggest that the prevalence of an environmental logic as opposed to the mainstream financial logic in a country increases the environmental performance of firms therein, but such influence is contingent upon power relationships at multiple levels: it is stronger to smaller firms and to firms with a younger age. This influence is also moderated by field characteristics, such as the fragmentation of the field that upholds the old logic and the presence of social movement organization in favor of the environmental logic. The context also matters in that systemic banking crises can disrupt this influence negatively. We aim to contribute to research on institutional theory and corporate social responsibility.

“Beyond investment banks and brokerage houses, modern finance has a public and governmental dimension, which clearly needs reinventing in the wake of the recent financial crisis. Setting the rules of the game for a robust, socially useful financial sector has never been more important” (Shiller, 2013: xi).

## INTRODUCTION

In the fund management industry, there is a rise of environmental investing that competes with the mainstream investing by emphasizes combining financial returns with positive environmental impact (Muñoz, Vargas, & Marco, 2013; Sparkes, 2003). Originating from the broad social investment movement since 1970s (Sparkes, 2003), environmental investing has a dedicated focus on the natural environment, since “No dimension of CSR has attracted as much attention from the business community as environmental protection” (Vogel, 2005: 133). Environmental investing is growing and the estimate suggests that in 2014 more than 30.2% of the global assets under professional management is screened with sustainability criteria, of which environmental standards are an indispensable component (GSI-Alliance, 2015). Environmental investing may have the potential to become a powerful impetus for social change (Haigh & Hazelton, 2004; Starr, 2008), but there is little systematic research addressing whether and when environmental investing shapes corporate environmental activities to date.

For that, we leverage and build on the institutional logics perspective which conceptualizes the society as an inter-institutional system consisting of multiple competing societal logics (Friedland & Alford, 1991; Thornton, Ocasio, & Lounsbury, 2012). Institutional logics define the content of the organizing principles of an institutional order, such as norms, values, assumptions, and practices (Ocasio, Thornton, & Lounsbury, 2017). With this perspective, prior studies have fruitfully examined how multiple competing field-level logics

within finance interact to influence organizational decision making and outcomes in mutual fund industry (Lounsbury, 2002, 2007), community banking (Almandoz, 2012, 2014; Marquis & Lounsbury, 2007), and securities analysts (Ioannou & Serafeim, 2014).

However, extant literature tends to emphasize how the presence of multiple logics renders heterogeneity and change in the field (Haveman & Rao, 1997; Lounsbury, 2002; Rao, Monin, & Durand, 2003; Thornton & Ocasio, 1999), yet the boundary condition of institutional influence arising from a competing logic is still under-researched. Thornton and Ocasio (2008: 118) suggest that, in addition to the presence of competing logics, a combination of factors, such as the prevalence of societal logics and power of institutional actors, should better account for causal mechanisms of institutional change. Most studies on competing logics tend to reinforce the misconception that logics equate institutions as sweeping forces, without considering the conditions that amplify or attenuate the strength of logics (see also Lounsbury, 2007).

To our knowledge, two studies importantly stood out as exceptions. Almandoz (2014)'s study suggests that the size of the group is an important condition to determine the extent to which individuals become carriers of institutional logics. His analysis reveals that when the group size is small, founding team is more likely to be based on individual discretions rather than competing logics. However, his analysis remains at the individual-organizational level and does not address how the cross-level dynamics work in terms of competing societal logics affecting focal organizations. Durand and Jourdan (2012)'s findings reveal that organizations' conformity to an alternative resource supplier holding a distinct logic competing with the mainstream depends on the organizations' adherence to the mainstream, the centrality of competing logic holder, and the competing logic's institutional credit. Yet, their study assumes a minority position of a competing logic rather than addressing its relative prevalence to other logics in the

field. Therefore, despite the merit of these studies, there is still a lack of systematic theorizing on how the structure of multiple competing logics in the field influences focal organization's activities.

In contribution to research on institutional logics and corporate environmental initiatives, we ask the following question: when does a logic of environmental investing that competes with the mainstream influence firms' environmental performance? Analyzing a cross-national sample of 678 firms across 21 countries from 2002 to 2011, we develop a multi-level framework that incorporates power as a boundary condition to account for the influence of novel logic and explains the extent to which environmental investing affect firms' environmental performance. Combining rich qualitative data from a one-year-long fieldwork and numerous transcripts from conference meetings between securities analysts and executives, we complement the quantitative analysis to enhance face validity, contextualize the findings, and enrich the illustration of mechanisms (Kaplan, 2015; Small, 2011; Sutton, 1997).

This study makes a few contributions. First, it contributes to research on organizations as carriers of institutional logics. The multi-level framework explains the conditions under which novel institutional logic is influential by bringing back the concept of power at a societal-level analysis (Fleming & Spicer, 2014; Friedland & Alford, 1991; Greve & Zhang, 2016). A more complete understanding of institutional effects of logics should consider both firm-level characteristics that determine power relations, field-level features that define the contestations between societal logics, and the contextual conditions that underlie these influences. Second, it highlights the role of the financial sector as a new driver of corporate environmental performance. Prior studies have examined how financial markets react to organizational performance in environmental dimensions (Bansal & Clelland, 2004; Berrone & Gomez-Mejia,

2009; Flammer, 2012; Konar & Cohen, 2001), but have relatively ignored how financial markets can actively influence firms' environmental performance. This study suggests that financial markets can play a positive role and suggests multi-level framework to predict this role.

## **THE RISE OF ENVIRONMENTAL LOGIC IN INVESTMENT PROFESSION**

Organizational fields are typically structured by a dominant institutional logic although a few alternative logics may exist at the same time (Durand & Jourdan, 2012; Reay & Hinings, 2009). The field of finance has developed a central logic that is characterized by self-interested assumptions, individualistic ethos and profit maximizing principles (Friedman, 1970; Jensen, 2002), and hence carriers of the mainstream financial logic hold a hostile view towards corporate environmental initiatives. Krüger (2015) argues that managers initiating these initiatives for their own interests at the expense of shareholders. His analysis shows that, despite a potential benefit from pleasing the stakeholders, this “agency problem” of managerial entrenchment does more harm than is recognized. Similarly, Fisher-Vanden and Thorburn (2011) provide evidence that voluntary commitment to reducing environmental footprint is inconsistent with firm value maximization. Indeed, Kim and Lyon (2015) even find that firms under-report their environmental performance to avoid negative evaluations from financial stakeholders. As Friedman (1970: 5) has argued, exercising these initiatives is considered “hypocritical window-dressing because it harms the foundation of a free society”, especially by those steeped in the mainstream financial logic (Jensen, 2002; Jonsson, 2009; Orlitzky, 2011).

This negative view on environmental commitment is not without challenges from within the financial sector. Although perceived as normatively deviant and actively resisted by mainstream finance professionals (Jonsson, 2009; Jonsson & Regnér, 2009), environmentally

friendly investing has manifested an alternative logic that competes with the traditional financial one. In addition to economic gains, it emphasizes reducing negative impact on the environment and embraces corporations with positive contributions to the planet. The assets managed by environmentally friendly investment funds has grown so much that the fragmentation of institutional logics has become an inevitable reality for the investment profession (Greenwood, Raynard, Kodeih, Micelotta, & Lounsbury, 2011; GSI-Alliance, 2015; Kraatz & Block, 2008; Sparkes, 2003). Pioneers in environmental investing often describe a strong demand from investors as a key driving force to sustain their movement against the resistance from the mainstream finance community. For example, founders of Jupiter Ecology from UK recalled “an early memory of a man in biker gear turning up at the office and writing out a check for \$16,500 shortly after the fund was launched. He said that this was ‘all his savings,’ and he believed in the fund's [environmental] mission and wanted to back it as fully as he could (Krosinsky, Robins, & Viederman, 2012: 18)”.

Environmental investing diverges from mainstream investing in a few crucial dimensions and these divergent activities can drive firms to improve their environmental performance. The most traditional investment strategy is screening, which is to under-weigh stocks with negative environmental record and over-weigh those with positive environmental contribution. Due to the preferences of environmentally friendly funds, firms with weak environmental performance will have less diversified ownership than those with strong performance and hence suffer from a higher cost of capital (Chava, 2014; El Ghouli, Guedhami, Kwok, & Mishra, 2011). Chava (2014) demonstrate that investors exert more return pressures on firms that emit toxic, produce hazardous waste, and face climate risk. Similarly, El Ghouli et al (2011) show that firms improving environmental policies can substantially reduce their cost of equity financing. Thus,

the desire to improve cost of capital as caused by exclusion will motivate firms to improve their environmental performance.

Another effective mechanism is engagement, which is to have a dialogue with the top management of the firm, sensitize them to environmental issues and make a persuasive case for improving environmental performance (Dimson, Karakaş, & Li, 2015; Ferraro & Beunza, 2014). For that, environmental investment funds disseminate their environmental logic via a series of institutional work that aims to strike resonance with corporate representatives (e.g., Tracey, 2016). For example, Ferraro and Beunza (2014)'s study shows that, due to numerous dialogues that frame environmental issues in business terms, Ford Motor transitioned from funding global warming deniers to leading socially responsible practices in the US automotive industry. Environmental investment funds can also diffuse their novel logic simply by sensitizing firms to overlooked environmental dimensions. For example, one fund manager said that “every time when we meet with management, we have a questionnaire looking at the environmental side...to address our concerns. Also at that time, the company realizes that it is a growing importance within our investment process (document, 2010)”.

With multiple influence strategies in hands, carriers of environmental logic in the investment profession have also developed tangible practices and procedures to hold firms accountable to their environmental activities. For example, a fund manager said: “We meet firms regularly to check whether practice diverges from stated policies and to encourage them to take steps to close gaps where they exist” (Investment Week, 2002). Similarly, another fund manager explained how rigorous their process has become of, because “[they] discuss how much they really spend in euros or pounds on their sustainability activities, what sustainable products or processes they are developing and the funding opportunities to achieve these (interview, 2014)”.

They have also developed sophisticated understandings of how to make more changes by talking to the right people in the corporation. For example, one fund manager explained “there will be some people who are concerned but do not have the power to do anything...” and it would be more effective to target “the people with purse strings” and those “closer to the [environmental] problem” because of their functions within the firm (Investment Adviser, 2003).

There is increasing evidence to suggest environmental investing is making positive social change, although the extent to which it happens may vary. It is often complicated to allocate credit for corporate environmental actions, such as starting to report environmental matters, but each environmentally conscious investing groups can confidently point to “a lengthening list of small triumphs” (Financial Times, 2002), because environmental reporting used to be pushed strongly by governments for years with limited success but has been rising with the emergence of environmental investing. For example, Morley, an investment management firm, once warned that it would “vote against annual reports of companies that did not seriously address environmental issues” and surprisingly received “so many positive commitments” even though some firms “remain recalcitrant” (Financial Times, 2002). In a similar vein, it has been reported that Friends Provident from UK engaged with 11 clothing retailers on production standards to which 7 have replied with a managerial commitment to improving the issue (The Express, 2001). What’s more, under an enduring pressure of environmental investing groups, Citigroup’s CEO Chuck Prince publicly announced in 2005, asking their client Rimbunan Hijau, a Malaysian company, to improve its logging practices in Southeast Asia.

Once successful transmitted from the field of environmental funds to firms, the environmental logic is manifested in a few crucial ways. First, firms susceptible to the environmental logic see it as an inevitable trend. For example, one corporate representative from



a high-tech firm described green initiatives as “not diminishing in any respect and there is just more and more pressure around the world for distributed clean green power (conference call, 2007)”. In a similar vein, another firm suggested that investing in environmental initiatives as a crucial imperative for future success, because “[p]ursuit to improve quality of life through research and to products like...green initiatives...renewable energy and alike, will continue to be done all over the world, and it is this research that should drive long-term growth and business (conference call 2008)”. Last but not least, one executive made the following remark to show his confidence in being green: “[G]lobal concerns are rising rapidly about environmental pollution, global warming, and the availability of affordable energy...I look at those macro trends...and as long as we keep our technology sharp, and we are present with the right sales and sales support and service, we have a tremendous future. I see no letup in that demand for a long, long time to come (conference call, 2013)”.

Second, firms susceptible to the environmental logic see it as a source of competitive edge. For example, one executive told securities analysts that green initiatives can place them at a unique market position relative to competitors, because “these green solutions offer [customers] real advantage when you look at the utility cost and the ongoing maintenance of this product (conference call, 2011)”. Similarly, another company believes that green initiatives confer a competitive advantage, because “the areas [they’re] working on are the enzymatic chemical reaction clean chemistry, the green chemistry. Those are very -- they're patented, they're unique [to them] (conference call, 2007)”.

Third, firms susceptible to the environmental logic see it as a corporate achievement. For example, company leaders emphasized their environmental achievements by highlighting that they “have started being included and named to a lot of these clean tech and green tech kind of

indices (conference call, 2010)”. Companies can also draw attentions to the fact that this environmental logic resonated with their corporate DNA which has defined their mission since the start of the company. For example, one CEO claimed that the “dedicated effort [towards environmental performance] spans many years, a philosophy that's been indoctrinated throughout our organization, from product conception to packaging (conference call, 2008)”.

### **POWER AROUND INSTITUTIONAL LOGIC TRANSMISSION**

Prior studies on competing logics tend to assume the strength of institutional logics without specifying them adequately (Ocasio et al., 2017; Thornton & Ocasio, 2008), but the transmission of institutional logics from field-level environmental investing logic to firms cannot be sufficiently explained without incorporating the effects of power relations. Power has been central to classical institutional studies (e.g., Selznick, 1949). Although neo-institutionalism shifts attentions to culture and cognition (DiMaggio & Powell, 1991), coercive pressures are essentially operate through power mechanisms and constitute a crucial component of isomorphism. Yet, there has not been adequate effort to systematically theorize power and institutions. As critics point out, “institutional theory’s allergy to power, conflict, and morality has held back organizational studies” (Hirsch & Lounsbury, 2015: 96).

Power is a relational concept in that it involves at least two parties to say that one has power over the other or vice versa (Emerson, 1962). Given a particular context, the logic holders of environmental investing from the field are the influencers and the firms are the recipients of the new competing logic. On the recipient end, firm characteristics such as firm size and firm age can be informative to understand resources and scales of a firm which can affect firm’s power

relative to the environmental investment funds. On the influencer end, prevalence of the environmental logic in fund management industry as opposed to the mainstream funds, fragmentation of the mainstream financial logic, and the presence of social movement in support of environmental investing can all play a role. Additionally, the context in which this relationship unfolds also affects the transmission of an institutional logic and shapes the relative power between carriers of the competing logics.

As a baseline, the promise of environmental logic in investing as potential transformational strategies for firms to become greener depends on the extent to which environmental funds are highly represented in the financial sector. In countries with a higher representation of environmental funds in the financial sector, screening as a mechanism for the transmission of the novel environmental logic from the environmental funds to firms will be more effective, because firms are more likely to depend on environmental funds for financial resources (Pfeffer & Salancik, 1978). Heinkel, Kraus, and Zechner (2001) estimate that the higher a focal firm's institutional ownership is green investors, the more likely firms will engage in meaningful environmental initiatives. Perrault and Clark (2016) suggest that the total assets under management play an important role in constructing the status of environmentally oriented shareholders, which increases firms' propensity to respond to environmental issues. Therefore, we hypothesize the following.

*Hypothesis 1: The higher the representation of environmental investing in a country's financial sector, the higher the environmental performance of firms in that country.*

## **Recipient Characteristic as a Moderator of the Impact of the Environmental Logic**

**Firm size.** The impact of the environmental logic from the field to firms is likely to vary due to recipient characteristics (i.e., firm characteristics). Firm size plays an important role to moderate the influence of environmental investment funds. Smaller firms are more likely to be peripheral actors in the field who are more motivated to change the status quo. Leblebici, Salancik, Copay, and King (1991) illustrate that it is the fringe players who introduce novel practices into the field, because they want to improve their own positions in the system relative to the central players (Battilana, 2010; Fligstein & McAdam, 2012). These actors are less advantaged under the existing rule of the game to which they have to comply with and always await opportunities for change (Fligstein & McAdam, 2012).

Firms of a smaller size are also less likely to defend from the influence of environmental investment funds, because these funds can more easily mobilize adequate resources to meet the threshold capital for which firms have to coopt with these funds' requirement on improving environmental performance (Heinkel et al., 2001; Pfeffer & Salancik, 1978). Firms of a smaller size are also less likely to get the attention from central players in the fund management industry whose values and norms are aligned with the traditional financial logic. One informant knowledgeable about the field of environmental investing said the following about why large financial organizations overlook non-mainstream practices: "A lot of financial institutions look for large projects, big amount and big volume here and there...They want something much bigger (fieldnote, 2010)". Indeed, small firms are less attractive because investing in them incurs a similar level of cost relative to large firms in terms of initial selection, due diligence, and subsequent monitoring.

Firms of a smaller size are also less likely to be hampered by internal complexities of operations, procedures, and practices that are hard to change and hence more likely to execute environmental initiatives once motivated to do so. Small firm size is a reflection of less task division and specialization, which then requires a lower effort for integration (Puranam, Raveendran, & Knudsen, 2012; Roberts, 2007; Thompson, 1976). Small firms are also less likely to diversify into multiple industry sectors, which further reduces the difficulty to develop meaningful environmental programs relevant to each industry sector.

In contrast, firms of a larger size are more likely to be central players, higher in resources to defend from the influence of environmental investment funds, more likely to be targeted by mainstream fund management firms, and less flexible in transitioning to environmentally friendly operations. They are less motivated to adopt a novel institutional logic, more capable in defending themselves from carriers of a novel logic, more likely to be targeted by carriers of the old logic, and face higher challenges in incarnating the logic into actual practices. Therefore, we hypothesize the following.

*Hypothesis 2a: The effects of environmental investing on the environmental performance of firms in a country are lower for large firms than for small firms.*

**Firm age.** The impact of the environmental logic transmitted from field to firms is likely to vary due to age of the firm. Firm age can play an important role to moderate the influence from the field logic of environmental investing as opposed to the mainstream investing logic because it affects the degree of inertial forces established in the firm, the level of bureaucratic

control in the firm, and the extent of legitimacy obtained from the mainstream legitimacy provider, all of which affect the susceptibility of the focal firm towards a rising competing logic.

Older firms are likely to be more inert than younger firms, since procedures, process, and practices become more established as age increases (Hannan & Freeman, 1984, 1977). The rising logic of environmental investing is less likely to influence older firms, since these firms face a greater challenge to make substantial changes. Older firms also exhibit a higher probability of being bureaucratic, which implies a higher level of impersonal character and inhibits possibilities of change. Other things being equal, even people who have worked for old firms are less likely to become entrepreneurs (Sørensen, 2007). The fact that firms are older also implies that they have gained a higher legitimacy in the context in which they are embedded than their younger counter-parties and hence have a lower failure rate, as suggested by organization ecology (Freeman, Carroll, & Hannan, 1983; Hannan, Pólos, & Carroll, 2007). Since carriers of the mainstream investing get to define the dominant version of legitimacy, they tend to pay more attention to older firms as opposed to younger firms which have yet to establish credit in the mainstream investing logic.

In contrast, young firms are less inert, less bureaucratic, and less attractive to carriers of the mainstream investing logic. They are more likely to be in want of crucial support from carriers of the environmental investing logic and less likely to have the operational baggage to carry out necessary reforms to improve their environmental record, thus we hypothesize the following:

*Hypothesis 2b: The effects of environmental investing on the environmental performance of firms in a country are lower for old firms than for young firms.*

## **Influencer Characteristic as a Moderator of the Impact of the Environmental Logic**

**Fragmentation of the dominant logic.** The impact of the environmental logic transmitted from funds to firms is likely to vary due to characteristics of the dominant financial logic. The extent to which the finance profession is fragmented is likely to play such a role. Although the traditional financial logic in the fund management industry generally prescribes profit maximizing principles (Friedman, 1970; Jensen, 2002), Lounsbury and colleagues (Lounsbury, 2002, 2007; Lounsbury & Crumley, 2007) show that multiple competing logics co-exist, each with distinct priority end goals and cultural toolkits. The definition of effectiveness is not a merely technical issue but institutionally shape (Lounsbury, 2007): firms steeped in a performance logic will look for high returns, whereas firms steeped in a trustee logic for low costs.

Yet, not all carriers of the competing logics are equal. Although actors in the finance profession collectively maintain a stable order of the field (Fligstein & McAdam, 2012), some social groups, such as holders of the environmental logic, are constantly searching for strategic opportunities to improve their conditions (Delmestri & Greenwood, 2016; Hampel & Tracey, 2016). Stratification of social groups within the field of finance inevitably generates a dominant group which enjoys a proportionally larger share of returns with products of similar qualities (Podolny, 1993) and a minority group which suffers from a lack of prestige in this competitive space (Jonsson, 2009; Jonsson & Regnér, 2009). Hence, the minority groups are more motivated to change the status quo.

Those minority groups, such as holders of environmental logic, can more effectively engage in institutionally deviant activities, when the field of finance in a country is characterized by diversity and fragmentation (Greenwood et al., 2011; Kraatz & Block, 2008; Oliver, 1991; Seo & Creed, 2002), because the dominant logic is less likely to be taken-for-granted. Oliver (1991) argues that resistance to the prevailing order is greater when multiple constituents co-exist in the field. Even in mature fields where institutional entrepreneurship is less likely, heterogeneity of organizational forms and practices can arise if leading actors are in boundary-spanning positions which expose them to multiple institutional influences (Greenwood & Suddaby, 2006). Therefore, we hypothesize the following.

*Hypothesis 3a: The effects of environmental investing on the environmental performance of firms in a country are higher where the financial sector is fragmented rather than unified.*

**Presence of alternative logic supporter.** The impact of the environmental logic transmitted from the field to firms is likely to vary due to the presence of a social movement organizations that supports the environmental logic. Social movement organization is a “purposive and collective attempt to change individuals and societal institutions and structures (Zald & Ash, 1966: 329)”. In the context of finance, the social movement organization that plays this role are the Principle of Responsible Investment (PRI) and social investment forums (SIF)<sup>1</sup>. These organizations arise to influence the institutional context in which the environmental investment funds will be situated, by disseminating information about environmental investing, transferring knowledge about environmental investing, and advocating policies for

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<sup>1</sup> SIF supports socially responsible investments, which has always included an explicit environmental dimension.



environmental investing. Whereas PRI is the most prominent global effort initiated by the United Nation that promotes socially responsible forms of investing, the SIFs are typically local endeavors for the same purpose. For example, one former leader of an SIF explicitly suggested that they will help, when requested, with the launch of environmental investment funds and help raise the profile of this investing in the region (document, 2001). Another SIF leader put it similarly: “[Our] mission is to raise public awareness and educate corporations and financial institutions about sustainable development and their role in making a safe, healthy, equitable and ecologically rich future (document, 2003)”.

In the presence of such social movement organizations, the influence of environmental investment funds on firm environmental performance will be positively moderated, because the public legitimacy of these funds will improve as these SIF organizations support environmental investment funds and challenge mainstream investment funds. For example, a regional leader of a SIF organization explained their strategy: “our 1<sup>st</sup> priority for our situation is we try to convince the championship from the financial sector. Let the local financial leaders to influence the local financial leaders...As long as they can kick off and buy in the concept, we are looking forward to the legacy of what originated by the financial community itself. That momentum will be very very promising for the future development (document, 2010)”. Although their success is contingent upon various factors, such as media attentions (King & Soule, 2007) and decision making logic of the corporations (Weber, Rao, & Thomas, 2009), it nevertheless generates pressures to deal with for actors steeped in the traditional financial logic.

The influence of environmental logic on firm environmental performance will also be positively moderated, also because the resources available to these funds will improve as these SIF organizations disseminate best practices. One of the most activities organized by these SIF

organizations is that they hold conferences to convene stakeholders interested in making socially responsible or environmentally friendly investments, including policy makers, business corporations, rating agencies, investors, and fund managers. For example, one fund manager shared his experience in engaging with corporations by changing the frame. He said that he used “climate risk” instead of “climate change” because this framing immediately caught more attentions (fieldnote, 2015). In a similar vein, one expert in engaging with firms suggested the following: “I change the way I talk about this. I just talk about project risk, operational risk, these fund managers understand very well (fieldnote, 2013)”. Therefore, we hypothesize as follows.

Hypothesis 3b: *The effects of environmental investing on the environmental performance of firms in a country are higher where advocate group for the environmental logic is present rather than absent.*

### **Context Characteristic as a Moderator of the Impact of the Environmental Logic**

**Systemic banking crises.** The impact of the environmental logic transmitted from the field to firms is likely to vary due to the presence of an exogenous shock that disrupts the entire finance profession (Meyer, 1982). Exogenous shocks include regulatory change (Tolbert & Zucker, 1983), technological shift (Barley, 1986), political upheaval (Allison, 1969) and economic crises (Laeven & Valencia, 2012). In the field of professional investing, systemic banking crises cause massive disruptions by reducing promising investment opportunities in the national economy and limiting supply of investment fund. As bank runs and liquidations occur during the crises, governments employ significant intervention measures to the losses in the banking system.

The presence of a systemic banking crisis is likely to hamper the influence of the environmental logic proportionally more than the mainstream financial logic. Although environmental investing has emerged as a promising alternative to mainstream investing, it has yet to become a necessity for asset owners. When systemic banking crisis occurs, the financially distressed investors may prioritize mainstream investing options over environmental investing because environmental investing is only an option when there is resource slack. For example, one fund manager complains that when her small green fund was “reaching a good size”, one of the biggest investor groups “pulled out their investments because they were hit by the 2008 financial crisis” (fieldnote, 2014). In a related way, a knowledge informant explained why environmental funds are relatively vulnerable to financial disruptions is because environmental funds tend to be smaller in size for their strong focus on the environmental sector which typically consists of “small-cap high-risk stocks” and hence suffer from a higher failure rate (fieldnote, 2013). This is likely to be exacerbated during banking crises which tend to cause drastic drops in national economic output and increases in public debt.

Therefore, although the entire field of professional investing suffers from systemic banking crises, carriers of the environmental logic are proportionally more affected than those of the mainstream logic because they occupy a more advantaged position to shield themselves from negative consequences. Therefore, we hypothesize the following:

*Hypothesis 4: The effects of environmental investing on the environmental performance of firms in a country are lower where a systemic banking crisis is present rather than absent.*

## METHODS AND ANALYSIS

### Research Process

During 2013-2014, we conducted a year-long fieldwork at one of the SIF organizations that promote social and environmental investment funds in Asia. We collected numerous proprietary documents that enhanced my understanding of the field. We participated in 4 industry conferences that relate to environmental investing from 2013 to 2015. Based on the new insights derived from the qualitative fieldwork, we formulated a few preliminary hypotheses that connect environmental investment funds and firm behavior with a focus on field-level characteristics.

To enrich the mechanisms and add face validity of the concepts that we want to develop, we coded evidences on the mechanisms through which firms can be influenced by environmental investment funds and the activities these firms tend to exhibit. For the latter, we purposefully sampled conference calls between securities analysts and high-tech US public firms from 2001-2013 with sales larger than 200 million USD or assets over 1 billion. This is an ideal setting to observe whether the novel environmental logic has seeped into firms because the securities analysts are expected to be beholders of the traditional financial logic (Benner & Ranganathan, 2012; Zuckerman, 2000).

After analyzing the qualitative data, we refined the hypotheses to include firms-level characteristics because these factors turned out to be as important as field-level dynamics and enhanced my explanations for the main effects. As a final step, we compiled a sample which

consists of 678 firms from 21 countries between 2002-2011, sourcing data mainly from Thomson Reuters ASSET4, The World Bank, OECD, Yearbook of International Associations, and Worldscope.

### **Dependent Variable: Environmental Score**

We rely on Thomson Reuters ASSET4 to measure the environmental performance of the firm. Other studies have approached it from objective pollution levels (Berrone, Cruz, & Gomez-Mejia, 2012; Berrone & Gomez-Mejia, 2009) to adopting energy-saving initiatives (Dowell & Muthulingam, 2016), but ASSET4 is a preferred choice in our study because it allows for more comprehensively capturing the influence of environmental investment funds whose scope of attentions may vary across funds and nations.

Utilized by multiple prior studies as a source of auditable and systematic non-financial information (Cheng, Ioannou, & Serafeim, 2014; Ghoul, Guedhami, & Kim, 2016; Hawn & Ioannou, 2015; Ioannou & Serafeim, 2012), the environmental score from ASSET4 is a z-score for each firm-year. It covers three major sectors: emission reduction, environmental product innovation, and resource deduction, and represents an overall rating based on 136 public and objective data points conducted by trained analysts.

### **Independent Variable: Environmental AuM**

Prior studies have measured institutional logics in different ways, but all strive to capture the ideal types of logics present in the field. Factors such as historical periods (Lounsbury, 2002; Thornton & Ocasio, 1999), geographic locations (Lounsbury, 2007), vocabularies (Dunn &

Jones, 2010), functional backgrounds (Almandoz, 2012, 2014), or an aggregate of multiple indicators (e.g., Lee & Lounsbury, 2015) can help contrast competing logics in the field.

In this study, we measure the prevalence of the environmental logic in investment profession by the AuM (asset under management) of environmental investment funds as a percentage of the capital market in a country. The information about environmental investment funds from Bloomberg whose analysts make classifications based on their reading of the legally binding fund prospectus (see Climent & Soriano, 2011).

The AuM is a key measure of success for professional investment funds and hence is better than the cumulative number of environmental investment funds or establishment rate of them as an indicator for the strength of the environmental logic. This measure is calculated as a percentage of the national capital market, which is the sum of market capitalization of all firms listed in the stock exchange(s). In a unreported robustness check, we use GDP as an alternative denominator for measuring the percentage of Environmental AuM in the national economy. The results are consistent.

To correct for skewness, we apply a logistic transformation. The higher this value, the more prevalent the environmental logic is in the investment profession, as opposed to the mainstream financial logic. This variable is at the country-level, so it has the advantage of being relatively exogenous to firm-level performance.

The green assets under management relative to the national economy is a useful indicator to measure the strength of the environmental logic in the investment profession. Our qualitative evidence has informed us that environmental investors tend to form coalitions when making claims on corporations. For example, Ferraro and Beunza (2014)'s in-depth case study

highlighted ICCR, a coalition organization that engages with corporations on behalf of numerous investors that are concerned about climate change, and this is more commonality than exception. Hence, a fund-firm design (e.g., Pahnke, Katila, & Eisenhardt, 2015) would be less effective to identify the influence of environmental investing and also harder to exclude the possibility of reverse causality.

### **Moderating Variable: Firm and Field Characteristics**

We use total assets to measure firm size and apply a natural-logarithm transformation to correct for skewness in distribution. We use logged number of years since founding of the firm to measure firm age, since the absolute number of years will result in Stata dropping the variable for multi-collinearity. Both variables are at the firm-year level and come from Worldscope. We use the number of professional finance associations headquartered in the country as a proxy for the fragmentation of the finance community in a field. The number of finance associations per country-year represents the internal fragmentation of professional finance and the data comes from Yearbook of International Associations. In unreported robustness checks, we also use number of Chartered Financial Analyst holders per 1 million people and the number of academic articles published in finance as measures of the strength of the mainstream financial logic and obtain consistent results. The presence of SIF organization is a dummy variable to indicate whether an SIF or a UNPRI signatory exist in a country in given year. Relying on prior studies on systemic banking crises (Laeven & Valencia, 2012), we coded our data to indicate whether a country-year is experiencing a systemic banking crisis.

## **Control Variable**

We rely on the World Bank for most country-level control variables and Worldscope for firm-level control variables (see table 1 for the list of variables and measures). Country-level control variables are critical to this study because it is reasonable to suspect a number of factors that drive both the rise of environmental logic in the investment profession and the increase in corporate environmental performance.

GDP per capita proxy for the general level of societal development and I apply a natural-logarithm transformation. It is possible that more developed countries correlate with the presence of an environmental logic in investing and a higher corporate environmental performance in a country. We control for both education and democracy as a prior study has found that they influence corporate social responsibility (Lim & Tsutsui, 2012) and both are likely to drive both the environmental logic in investing. Following prior studies (Berrone & Gomez-Mejia, 2009; Marquis, Toffel, & Zhou, 2016), we control for environmental policy stringency, which is obtained from OECD. This is again an important control variable because prior studies suggested that national policies can importantly shape the scope of environmental investing (Sparkes, 2003; Vasudeva, 2013).

At the firm level, we control for leverage ratio since firms with more financial slack have more resources to improve environmental performance. We control for price-to-book ratios because high growing firms may pay less attentions to non-financial dimensions. We control for R&D intensity and SGA intensity as prior studies have found their effects on corporate social performance (Hawn & Ioannou, 2015; McWilliams & Siegel, 2000). We control for return on equity since profitable firms are more likely to engage in environmentally friendly activities. We



also control for product diversifications, as they may increase pressures to improve environmental performance (Kang, 2013). Lastly, we also control for past environmental score.

--Insert Table 1 here--

## Model Specification

We used fixed-effects specification at the firm level and include year dummies in all models to estimate the influence of environmental AuM on firm environmental performance with robust standard errors. We lag the right-hand-side variables by one year to mitigate reverse causality and simultaneity bias. The estimation model goes as follows:

$$\begin{aligned} \text{Environmental Score}_{it} = & \alpha_0 + \alpha_1 \text{Environmental Logic}_{it-1} + \alpha_2 \text{Firm-level Controls}_{it-1} + \\ & \alpha_3 \text{Country-level controls}_{it-1} + \mu_i + \mu_t + \varepsilon_{it}, \end{aligned}$$

where  $i$  indicates firms,  $t$  indexes years.  $\mu_i$  denotes firm-level fixed effects,  $\mu_t$  denotes year fixed effects, and  $\varepsilon_{it}$  denotes an error term.

## RESULTS

Table 2 presents summary statistics and correlation table. The prevalence of the environmental logic is negative due to logistic transformation. Its absolute value is very small, which is less than 0.0001%, because the entire stock market is of a much large scale. However, given its small size, it provides a more conservative estimation to the influence of environmental logic.

--Insert Table 2 here--

Table 3 presents regression results of the effects of the environmental investment funds at the country level on environmental performance at the firm level. Due to high multi-collinearity, We centered most variables except dummies prior to these regression analyses. In model 1, only control variables are included. As expected, past environmental score significantly predicts current score. The positive and significant coefficient of GDP per capita shows that wealthier countries are more likely to be associated with a higher level of corporate environmental performance. The fragmentation of finance also has a positive and significant coefficient, suggesting that heterogeneity of the investment profession is allowing for a higher level of corporate environmental performance.

In model 2, hypothesis 1 receives support. Environmental logic is significantly at the 0.05 level. This quantitatively confirms that the environmental logic in the investment profession indeed has a positive effect on corporate environmental performance on average. In model 3, hypothesis 2a is supported. The interaction term of firm size and environmental logic is negative and significant, suggesting that the larger the firm the less influence environmental investment funds have over firms. In a similar vein, hypothesis 2b is supported in model 4. The interaction term of firm age and environmental logic is negative and significant, indicating that larger boards are less susceptible to the impact of environmental investment funds in terms of delivering environmental performance.

In model 5, hypothesis 3a receives support. While the fragmentation of finance itself has a statistically significant and positive effect, it positively moderates the influence of environmental investment funds on firms, although the significance is at 0.1 level. Similarly, hypothesis 3b receives moderate support in model 6. The interaction term for SRI organization and the prevalence of the environmental logic is significant at the 0.1 level. In model 7, hypothesis 4

receives some support. The negative and significant coefficient confirms that the environmental logic fares weaker relative to the mainstream financial logic when crises occur that drain resources available in the field. Finally, the full model, which include all interaction terms, indicate that hypothesis 2a and hypothesis 3a still receive strong support.

--Insert Table 3 here--

## **DISCUSSION AND CONCLUSION**

This study suggests a set of boundary conditions for the influence of field-level logic on focal firms. At the firm level, the influence of environmental investment funds is stronger for smaller firms, because its peripheral position motivates, its high reliance on less conventional investment funds, and its relative simplicity to change. The influence is also stronger for firms with a younger age, for its relative lack of bureaucracy and less legitimacy with the carriers of the existing financial logic. At the field level, the influence of environmental investment funds is stronger when the mainstream finance is more fragmented (Kraatz & Block, 2008), because firms are more likely to experience contradictions and hence less attached to taken-for-granted norms. Social movement organizations such as social investment forum and United Nation backed Principles of Responsible Investment also moderate the influence of environmental investment funds because they pressure mainstream investment funds, convene the likely-minded in environmental investing, and share experience to engage with firms to improve environmental performance. Lastly in terms of the context in which this influence takes place, systemic banking crises that drains the available resources in a field favors carriers of the existing logic which occupy favorable positions and weaken the effect of the environmental logic in the investment profession on corporations.

This study contributes to research on organizations as carriers of institutional logics by specifying a multi-level framework which explains the conditions under which organizational actors are more susceptible to the influence of stakeholder logic. Prior institutional research aims to break away from the misconception that institutions only homogenize organizational structures and practices (Lounsbury, 2007), but the predominance of empirical studies still portraying institutions as top-down imperatives only reinforce such misconceptions (Zilber, 2016). This study aims to dispel these misconceptions by building a stronger framework that articulates the boundary conditions of institutional effects of competing logics. Similar to Marquis and Lounsbury (2007), we suggest that the emergence of a novel logic in the field increases the institutional pluralism in the field. Close to Almandoz (2014), we argue that institutional effects arising from competing logics require important qualifications to hold true. Yet, this study differs from extant literature by emphasizing how it can shape organizational activities in a dependent field and reintroducing power into the center of institutional studies (Fleming & Spicer, 2014; Greve & Zhang, 2016; Munir, 2015).

In line with prior studies that explicitly integrate power into institutional analysis (Lawrence, Winn, & Jennings, 2001; Selznick, 1957), the multi-level framework that emerges from this study explains that less powerful firms, as proxied by firm size and firm age, are more subject to the influence of environmental logic in the investment profession. It also explains how the unity of power base of the mainstream investment funds, represented by field fragmentation and the presence of social movement, can moderate the influence of environmental logic in the investment profession. It also suggests that exogenous shocks that shape the structure of the field can moderate the influence of environmental logic in the investment profession. Institutional theory, since the rise of neo-institutionalism, has been much about cognition and culture, but less

about power and conflict (DiMaggio, 1988; DiMaggio & Powell, 1991). This study suggests that a better understanding of institutions requires an explicit consideration of power because it sets up the boundaries in which competing logics play a role to impact organizations.

This study also contributes to the emerging research on how the financial sector can become a new driver of corporate social responsibility. Prior studies have focused on whether environmental performance attract positive investor reactions (Bansal & Clelland, 2004; Berrone & Gomez-Mejia, 2009; Flammer, 2012; Konar & Cohen, 2001) and whether environmental investment funds may outperform mainstream funds (Barnett & Salomon, 2006; Climent & Soriano, 2011; Kiernan, 2009; Lewis, 2002; Muñoz et al., 2013), but few have empirically looked into whether finance can positively contribute to a better environment (see Heinkel et al., 2001 for an exception).

Departing from most prior studies that ask what business case exist in environmental investing, this study addresses what environmental investing accomplishes for the society (Margolis & Walsh, 2003; Rivoli, 2003). Friedman (1970)'s vision of the society, on which the traditional financial logic is based, defines business firms as pure profit maximizing entities, because it would be most efficient for firms to care only business issues rather than social functions. However, Benabou and Tirole (2010) point out that the delegated behavior on behalf of stakeholders is an important motivation for corporate social responsibility because firms might be more efficient in carrying out certain activities due to their unique resource configurations. For example, Starbucks is well placed to distribute free-trade coffee through its wide-reaching retail shops. Yet, few studies have examined empirically whether this delegation can occur and when this can occur.

This study focuses on the financial sector, which has been rather stigmatized as a source of greed and immorality especially after the financial crisis. Yet our study shows that it has nevertheless spun off a significant group of organizations that champion for issues beyond the scope of orthodox economic-rational analysis, such as environmental protection, social justice, and governance quality. In addition to environmental investment funds, these organizations include social investment funds (Sparkes, 2003), community banks (Almandoz, 2014), credit unions, and more in the making by institutional change agents who creatively recast forces of the financial markets for the pressing needs of the society. It is of critical importance to understand the consequence of these organizations, such as the environmental investment funds, because they exemplify a central promise of modern market capitalism to deliver progress to the society, which is its self-corrective and self-reinventive capacity. This study suggests that financial markets can indeed play this role and identify multi-level factors that moderate this role.

## APPENDIX

**Table 1: List of Variables and Definitions**

Variable	Description	Source
Environmental AuM	Assets under management by SRI funds as a fraction of all listed equities (logistic transformed)	Bloomberg
Societal development	GDP per capita (logged)	World Bank
Education	Enrollment ratio in the secondary education	World Bank
Democracy	Unified democratic score combines measures from 12 existent democracy measures (among others, Freedom House, Polity, Polyarchy, Vanhanen)	<a href="http://www.unified-democracy-scores.org/">www.unified-democracy-scores.org/</a>
Environmental policy stringency	The stringency of national environmental policy	OECD
Firm size	Total assets (logged)	Worldscope
Firm age	Logged number of years since founding of the firm	Worldscope
Leverage ratio	Total equity over total assets	Worldscope
Price-to-book ratio	Market capitalization over book value (logged)	Worldscope
R&D intensity	R&D expense over sales (logged)	Worldscope
SGA intensity	SGA expense over sales (logged)	
Return on equity	Operating profit before tax over equity	Worldscope
Product diversification	Herfindahl index of sales in product segments	Worldscope
Fragmentation of Finance	Number of different financial associations	Yearbook of International Associations
Support organization	Dummy: 1 = if social investment forum or UNPRI signatory exists and 0 = it does not in given country and year	Hand-coded
Systemic banking crises	Dummy: 1 = if there is a systemic banking crisis Dummy: 1 = if there is no systemic banking crisis	(Laeven & Valencia, 2012)

**Table 2: Summary Statistics and Correlation Tables**

		mean	sd	min	max	1	2	3	4	5
1	Environmental Score	67.85	29.65	8.72	97.30	1.00				
2	Past Environmental Score	65.91	30.32	9.26	97.30	0.89	1.00			
3	Leverage ratio	0.47	0.20	-0.56	1.16	-0.25	-0.25	1.00		
4	Price-to-book(log)	0.71	0.71	-2.12	8.15	-0.15	-0.16	-0.07	1.00	
5	R&D Intensity (log)	-3.88	1.60	-12.66	6.41	0.04	0.03	0.30	0.19	1.00
6	SGA	-1.64	0.74	-5.15	6.85	-0.12	-0.12	0.32	0.26	0.55
7	Return on Equity	0.16	1.15	-54.72	32.06	0.01	0.01	0.00	0.07	-0.02
8	Product diversification	0.54	0.25	0	1	-0.24	-0.24	0.26	0.10	0.11
9	GDP per capita(log)	10.59	0.14	10.16	11.12	-0.12	-0.13	0.06	0.36	0.12
10	Democracy	1.48	0.28	1.07	2.26	-0.03	-0.04	0.01	0.25	0.06
11	Education	100.64	6.81	92.47	159.15	0.16	0.17	-0.08	-0.14	-0.09
12	Environment policy stringency	2.19	0.66	1.05	4.13	0.15	0.15	-0.02	-0.01	-0.01
13	Assets (log)	17.78	2.68	9.94	24.20	0.30	0.32	-0.11	-0.47	-0.15
14	Age (log)	3.99	0.86	0	5.69	0.23	0.23	-0.17	-0.18	-0.13
15	Fragmentation of Finance	11.28	12.55	0	33	-0.20	-0.23	0.05	0.40	0.18
16	SRI organization	0.98	0.14	0	1	0.01	0.00	0.01	-0.06	0.01
17	Banking crisis	0.29	0.45	0	1	0.02	0.00	0.00	0.20	0.07
18	Environmental logic	-21.75	1.65	-26.11	-15.62	0.22	0.23	-0.15	-0.13	-0.11

6	7	8	9	10	11	12	13	14	15	16	17	18
1.00												
-0.01	1.00											
0.10	0.02	1.00										
0.07	0.04	0.06	1.00									
0.05	0.03	0.02	0.76	1.00								
-0.03	-0.01	-0.07	-0.21	0.09	1.00							
0.04	0.01	-0.03	0.24	0.35	0.24	1.00						
-0.21	-0.01	-0.10	-0.53	-0.47	0.10	-0.30	1.00					
-0.16	0.04	-0.16	-0.15	-0.12	0.02	-0.01	0.17	1.00				
0.11	0.02	0.07	0.43	0.14	-0.52	0.03	-0.62	-0.07	1.00			
-0.01	-0.01	0.01	-0.11	-0.27	-0.46	-0.07	0.10	0.04	0.11	1.00		
0.08	0.03	0.03	0.39	0.27	-0.20	0.61	-0.50	-0.03	0.52	0.09	1.00	
-0.04	-0.03	-0.08	-0.01	0.16	0.60	0.38	-0.05	-0.01	-0.50	-0.16	0.03	1.00



**Table 3: Effects of Environmental Investment Funds on Firm Environmental Performance**

2002-2011	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Past environmental score	0.44*** (23.76)	0.44*** (23.93)	0.43*** (23.84)	0.44*** (24.02)	0.43*** (23.94)	0.44*** (23.86)	0.43*** (23.67)	0.43*** (23.58)
Leverage ratio	-2.66 (-0.77)	-2.10 (-0.60)	-1.81 (-0.52)	-1.99 (-0.58)	-1.82 (-0.52)	-2.16 (-0.62)	-1.83 (-0.53)	-1.73 (-0.50)
Price-to-book(log)	-0.32 (-0.45)	-0.22 (-0.31)	-0.03 (-0.04)	-0.15 (-0.22)	-0.19 (-0.27)	-0.19 (-0.27)	-0.28 (-0.39)	-0.01 (-0.01)
R&D intensity (log)	0.27 (0.33)	0.28 (0.35)	0.22 (0.27)	0.31 (0.37)	0.27 (0.33)	0.24 (0.29)	0.22 (0.27)	0.15 (0.18)
SGA intensity (log)	-1.61 (-1.19)	-1.64 (-1.21)	-1.69 (-1.24)	-1.64 (-1.20)	-1.62 (-1.19)	-1.50 (-1.11)	-1.64 (-1.20)	-1.54 (-1.12)
Return on Equity	-0.10 (-1.06)	-0.10 (-1.03)	-0.08 (-0.73)	-0.11 (-1.01)	-0.10 (-0.98)	-0.11 (-1.05)	-0.09 (-0.92)	-0.07 (-0.71)
Product diversification	-1.36 (-0.77)	-1.43 (-0.82)	-1.19 (-0.70)	-1.13 (-0.65)	-1.39 (-0.80)	-1.47 (-0.85)	-1.24 (-0.72)	-0.96 (-0.56)
GDP per capita(log)	36.40 <sup>+</sup> (1.70)	40.90 <sup>+</sup> (1.87)	18.26 (0.83)	38.44 <sup>+</sup> (1.74)	39.57 <sup>+</sup> (1.80)	42.84 <sup>+</sup> (1.96)	53.02* (2.31)	29.51 (1.26)
Democracy	-0.95 (-0.46)	-0.19 (-0.09)	0.17 (0.08)	-0.53 (-0.25)	0.21 (0.10)	-0.16 (-0.08)	-2.06 (-0.95)	-1.43 (-0.64)
Education	-0.06 (-0.60)	-0.08 (-0.85)	-0.09 (-0.92)	-0.09 (-0.88)	-0.07 (-0.71)	-0.07 (-0.74)	-0.07 (-0.72)	-0.08 (-0.76)
Environment policy stringency	0.25 (0.42)	0.57 (0.89)	-0.60 (-0.88)	0.52 (0.82)	-0.11 (-0.15)	0.64 (1.01)	0.24 (0.38)	-0.45 (-0.64)
Assets (log)	1.40 (1.14)	1.57 (1.28)	1.91 (1.52)	1.49 (1.22)	1.65 (1.34)	1.61 (1.32)	1.49 (1.21)	1.81 (1.43)
Age (log)	-2.96 (-1.15)	-3.00 (-1.20)	-3.11 (-1.26)	-2.45 (-1.08)	-2.99 (-1.19)	-3.17 (-1.27)	-2.85 (-1.17)	-2.85 (-1.27)
Fragmentation of Finance	2.35*** (4.59)	2.62*** (4.72)	2.43*** (4.40)	2.51*** (4.50)	2.55*** (4.60)	2.63*** (4.73)	2.08*** (3.62)	2.04*** (3.54)
SRI organization	3.62 (1.38)	4.36 (1.64)	4.06 (1.50)	4.55 <sup>+</sup> (1.70)	4.27 (1.60)	-0.13 (-0.03)	4.26 (1.59)	-0.85 (-0.21)
Banking crisis	0.06 (0.07)	-0.34 (-0.37)	-1.15 (-1.22)	-0.26 (-0.28)	-0.75 (-0.80)	-0.38 (-0.42)	1.18 (1.01)	0.07 (0.06)
Environmental logic		1.24* (2.11)	1.26* (2.11)	1.36* (2.32)	1.49* (2.44)	-0.32 (-0.31)	0.92 (1.63)	-0.71 (-0.68)
Environmental logic * Assets (log)			-0.82*** (-4.33)					-0.75*** (-3.51)
Environmental logic * Age				-0.85* (-2.20)				-0.52 (-1.38)
Environmental logic * Fragmentation of Finance					0.10 <sup>+</sup> (1.81)			-0.03 (-0.48)
Environmental logic * SRI organization						1.77 <sup>+</sup> (1.89)		1.97* (2.11)
Environmental logic * Banking crisis							-0.96* (-2.51)	-0.65 (-1.64)
Constant	-36.42*** (-4.21)	-39.18*** (-4.39)	-31.84*** (-3.64)	-38.51*** (-4.28)	-38.51*** (-4.28)	-35.41*** (-4.02)	-42.88*** (-4.62)	-30.57*** (-3.42)
R-square	0.38	0.38	0.39	0.38	0.38	0.38	0.39	0.39
Observations	4668	4668	4668	4668	4668	4668	4668	4668
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firms	678	678	678	678	678	678	678	678

*t* statistics in parentheses

<sup>+</sup>  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

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